IN THE CLAIMS

Please amend claims 1-14, 16-18 and 20-21 as indicated below.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended) A method of applying a stable conditioning effect to a cross-linkable material substrate ~~thereby improving the absorbency of said substrate~~, said conditioning effect comprising exposing the substrate to the ~~at least two~~ treatment steps of:

(i) cross-linking of the material of either the exterior surface or any internal surfaces of the substrate, or cross-linking the material of both surfaces ~~the exterior and internal surfaces of the substrate~~; and

(ii) plasma modification of, or plasma deposition ~~of/onto~~ onto, the cross-linked material[[.]];

wherein the cross linking of the material in step (i) can optionally be performed by plasma modification.

Claim 2 (currently amended) ~~A method according to claim 1 wherein steps (i) and (ii) are both performed and in sequence.~~ A method of applying a stable conditioning effect to a substrate, said conditioning effect comprising exposing the substrate to the treatment steps of:

(i) cross-linking of the material of either the exterior surface or any internal surface of the substrate, or cross-linking the material of both surfaces, by plasma modification; and

(ii) plasma modification of, or plasma deposition onto, the cross-linked material.

Claim 3 (currently amended) A method according to claim 1 wherein a precursor gas or liquid is used in the generation of the plasma in either or both of steps (i) or (ii), said precursor gas being a noble, inert, oxygen containing or nitrogenous gas.

Claim 4 (currently amended) A method according to claim 3 wherein the ~~coating~~ material substrate is modified in the first step (i) ~~in the~~ to form [[of]] a hydrophilic layer ~~in the first step~~ with the plasma ~~treatment~~ modification or plasma deposition in the second step (ii) acting to oxidise or nitrogenate the ~~material~~ hydrophilic layer.

Claim 5 (currently amended) A method according to claim 4 wherein the precursor gas or liquid used in the second plasma treatment step (ii) are ~~oxygen or nitrogen containing~~ chemical compounds containing oxygen or nitrogen.

Claim 6 (currently amended) A method according to claim [[4]] 5 wherein the hydrophilic layer is oxidized using ozone ~~an oxidation method is used in the form of ozonolysis~~.

Claim 7 (currently amended) A method according to claim 3 wherein the precursor gas or liquid used for the plasma modification or deposition treatment in step (ii) contains fluoride.

Claim 8 (currently amended) A method according to claim [[1]] 3 wherein the precursor gas used produces ~~plasma used is~~ a non-equilibrium plasma generated by a radio frequency, microwaves and/or direct current.

Claim 9 (currently amended) A method according to claim 8 wherein the ~~plasma~~ power applied to generate a plasma during the first step (i) is in the range of 0.01 watt to 500 watts.

Claim 10 (currently amended) A method according to claim 8 wherein the ~~plasma~~ power applied to generate a plasma during the second step (ii) is in the range of 0.01 watt to 500 watts.

Claim 11 (currently amended) A method according to claims 9 and 10 wherein the ~~plasma~~ power applied during either or both of the first (i) and second steps (ii) is pulsed.

Claim 12 (currently amended) A method according to claim 3 wherein the precursor gas or liquid introduced during either or both the first and second steps is introduced in a pulsed fashion.

Claim 13 (currently amended) ~~A method according to claim 1 wherein the substrate is defined as any article capable of supporting a coating applied thereto.~~ A method of applying a stable conditioning effect to a crosslinkable material substrate, said substrate being defined as any article capable of supporting a coating applied thereto and said conditioning effect comprising exposing the substrate to the treatment steps of:

(i) cross-linking of the material of either the exterior surface or any internal surfaces of the substrate, or cross-linking the material of both surfaces; and

(ii) plasma modification of, or plasma deposition onto, the cross-linked material;

wherein the cross linking of the material in step (i) can optionally be performed by plasma modification.

Claim 14 (currently amended) A method according to claim 13 wherein the substrate is a porous article ~~with an exterior surface~~, a bulk matrix and pores extending from the exterior surface into the bulk matrix, said bulk matrix exterior and interstitial surfaces, at least in part, being polymeric or oligomeric.

Claim 15 (original) A method according to claim 14 wherein the bulk matrix is a polyolefin.

Claim 16 (currently amended) A method according to Claim 15 wherein the bulk matrix has a void volume ~~ranging from 0.01%~~ up to 99%.

Claim 17 (currently amended) A method according to claim 13 wherein the first step (i) is controlled such that the effect of said step is controlled to be applied to a limited depth of the material below the external surface.

Claim 18 (currently amended) A method according to claim 13 wherein in the second step (ii) the effect of said step is controlled to be applied to a limited depth into the material below the external surface of the substrate.

Claim 19 (previously presented) A method according to claim 13 wherein the plasma used in either or both steps (i) and (ii) is selectively applied to localised areas across the substrate surface and/or below the substrate surface.

Claim 20 (currently amended) A method according to claim 13 wherein the material is an absorbent, hydrophobic polymer which is heated by step (i) to be cross linked by a noble gas plasma to improve its ability to retain liquid and render it superabsorbent by being able to retain more liquid than the material would be able to without cross linking.

Claim 21 (currently amended) A method according to claim 20 wherein the material is modified by a subsequent nitrogenating plasma as step (ii) to render said cross linked polymer compatible with amine functionalities to form a super-absorbent polymer with improved capabilities ~~capable~~ of retaining ~~large quantities of~~ amine containing aqueous solutions.

Claim 22 (previously presented) A method according to claim 1 wherein the substrate is a superabsorbent material.

Claim 23 (previously presented) A substrate having a modified surface, said surface modified by the method as set out in claim 1.